

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An organic light emitting diode (OLED), comprising:

a single universal host that can be used for red, green and blue dopants for full color display, as specified by the CIE for red, gree and blue dopants ;

a hole transporting layer;

an electron transport layer;

wherein said hole transporting layer and said electron transport layer are on opposing sides of said universal host, and are in electrical contact with said universal host;

wherein ~~said hole transporting layer, said electron transport layer, and~~ said universal host together comprise's an active portion emitting layer of said OLED;

electrodes on opposing sides of said active portion for providing a bias across said active portion;

wherein at least one of said electrodes is transparent.

Claim 2 (original): The OLED of claim 1, wherein said universal host is a material adapted to emit at wavelengths in the blue visible light region or shorter.


Claim 3 (original): The OLED of claim 1, wherein said universal host is doped with a red emitting material.

Claim 4 (original; tentatively allowable): The OLED of claim 3, wherein said universal host

comprises 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said red emitting material is 6,13-diphenylpentacene.

Claim 5 (original): The OLED of claim 1, wherein said universal host is doped with a green emitting material.

Claim 6 (original; tentatively allowable): The OLED of claim 5, wherein said universal host material is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said green emitting material is N,N'-diethylquinacridone.

 Claim 7 (original): The OLED of claim 1, wherein said universal host is doped with a blue emitting material.

Claim 8 (original; tentatively allowable): The OLED of claim 1, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 9 (original; tentatively allowable): The OLED of claim 1, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 10 (original): The OLED of claim 1, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 11 (original): The OLED of claim 10, wherein said transparent anode material is indium tin oxide.

Claim 12 (original): The OLED of claim 1, wherein one of said electrodes comprises a metallic cathode.


Claim 13 (currently amended): The OLED of claim ~~1~~ 12, wherein said metallic cathode comprises an alloy of Mg and Ag.

Claim 14 (original): The OLED of claim 1, wherein a hole blocking layer is inserted between

said universal host and said electron transport layer, and wherein said hole blocking layer, said hole transporting layer, and said electron transport layer are in electrical contact with said universal host;

Claim 15 (currently amended): The OLED of claim ~~1~~ 14, wherein said hole blocking layer comprises bathocuproine.

Claim 16 (currently amended): An organic light emitting diode (OLED), comprising:

 a hole transporting layer;

an electron transport layer that is also a single universal host that can be used for red, green and blue dopants;

wherein said hole transporting layer and said electron transport layer are placed in series, and are in electrical contact with each other;

wherein said hole transporting layer and said electron transport layer together comprise an active portion of said OLED;

electrodes on opposing sides of said active portion for providing a bias across said active portion;

wherein at least one of said electrodes is transparent.

Claim 17 (original): The OLED of claim 16, wherein said electron transport layer is a material adapted to emit at wavelengths in the blue visible light region or shorter.

Claim 18 (original): The OLED of claim 16, wherein said electron transport layer is doped with a red emitting material.

Claim 19 (original; tentatively allowable): The OLED of claim 18, wherein said red emitting material is 6,13-diphenylpentacene.

Claim 20 (original): The OLED of claim 16, wherein said electron transport layer is doped with a green emitting material.

Claim 21 (original): The OLED of claim 20, wherein said green emitting material is N,N'-diethylquinacridone.

Claim 22 (original): The OLED of claim 16, wherein said electron transport layer is doped with a blue emitting material.

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Claim 23 (original; tentatively allowable): The OLED of claim 16, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 24 (original; tentatively allowable): The OLED of claim 16, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 25 (original): The OLED of claim 16, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 26 (original): The OLED of claim 25, wherein said transparent anode material is indium tin oxide.

Claim 27 (original): The OLED of claim 16, wherein one of said electrodes comprises a metallic cathode.

Claim 28 (currently amended): The OLED of claim ~~16~~ 27, wherein said metallic cathode comprises an alloy of Mg and Ag.

Claim 29 (currently amended): An organic light emitting diode (OLED), comprising:

a hole transporting layer that is also a single universal host that can be used for red, green and blue dopants ;

an electron transport layer;

wherein said hole transporting layer and said electron transport layer are placed in series,  
and are in electrical contact with each other;

wherein said hole transporting layer and said electron transport layer together comprise  
an active portion of said OLED;

electrodes on opposing sides of said active portion for providing a bias across said active  
portion;

wherein at least one of said electrodes is transparent.

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Claim 30 (original): The OLED of claim 29, wherein said hole transporting layer is a material  
adapted to emit at wavelengths in the blue visible light region or shorter.

Claim 31 (original): The OLED of claim 29, wherein said hole transporting layer is doped with a  
red emitting material.

Claim 32 (original; tentatively allowable): The OLED of claim 31, wherein said red emitting  
material is 6,13-diphenylpentacene.

Claim 33 (original): The OLED of claim 29, wherein said hole transporting layer is doped with a  
green emitting material.

Claim 34 (original): The OLED of claim 33, wherein said green emitting material is N,N'-  
diethylquinacridone.

Claim 35 (original): The OLED of claim 29, wherein said hole transporting layer is doped with a  
blue emitting material.

Claim 36 (original; tentatively allowable): The OLED of claim 29, wherein said hole  
transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 37 (original; tentatively allowable): The OLED of claim 29, wherein said electron

transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

Claim 38 (original): The OLED of claim 29, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 39 (original): The OLED of claim 38, wherein said transparent anode material is indium tin oxide.

Claim 40 (original): The OLED of claim 29, wherein one of said electrodes comprises a metallic cathode.

Claim 41 (currently amended): The OLED of claim ~~29~~ 40, wherein said metallic cathode comprises an alloy of Mg and Ag.

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Claim 42 (new): An organic light emitting diode (OLED) comprising:

a single universal host that can be used for red, green and blue dopants having carrier transport properties.

Claim 43 (new): The OLED of claim 42, wherein said universal host is doped with a red emitting material.

Claim 44 (new): The OLED of claim 3, wherein said universal host is a material adapted to emit at wavelengths in the blue visible light region or shorter and comprises 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said red emitting material is 6,13-diphenylpentacene.

Claim 45 (new): The OLED of claim 42, wherein said universal host is doped with a green emitting material.

Claim 46 (new): The OLED of claim 45, wherein said universal host material is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene, and wherein said green emitting material is N,N'-diethylquinacridone.

Claim 47 (new): The OLED of claim 42, wherein said universal host is doped with a blue emitting material.

Claim 48 (new): The OLED of claim 42, wherein said hole transporting layer is 4,4-bis(1-naphthylphenyl-amino)biphenyl.

Claim 49 (new): The OLED of claim 42, wherein said electron transport layer is 5,5'-bis(dimesitylboryl)-2,2'-bithiophene.

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Claim 50 (new): The OLED of claim 42, wherein at least one of said transparent electrodes comprises a glass substrate coated with a transparent anode material.

Claim 51 (new): The OLED of claim 50, wherein said transparent anode material is indium tin oxide.

Claim 52 (new): The OLED of claim 42, wherein one of said electrodes comprises a metallic cathode.

Claim 53 (new): The OLED of claim 52, wherein said metallic cathode comprises an alloy of Mg and Ag.

Claim 54 (new) The OLED of claim 42, wherein a hole blocking layer is inserted between said universal host and said electron transport layer, and wherein said hole blocking layer, said hole transporting layer, and said electron transport layer are in electrical contact with said universal host;

Claim 55 (new): The OLED of claim 54, wherein said hole blocking layer comprises bathocuproine.

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